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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,761	01/23/2002	Nassim Usman	MBHB00-816-E (700.005)	4475

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EXAMINER

CHAKRABARTI, ARUN K

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 02/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
10/056,761

Applicant(s)  
Usman

Examiner  
Arun Chakrabarti

Art Unit  
1634



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 1/23/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-11 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☒ Other: *Detailed Action*

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-6, and 9-11, drawn to nucleic acids, classified in class 536, subclass 22.1.
  - II. Claims 7-8, drawn to an enzymatic reaction method, classified in class 435, subclass 91.1.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the nucleic acid of Group I can be used in the enzymatic reaction method of Group II or can be used in the production of RNA or protein or can be used to make antisense nucleic acid for gene therapy.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. A telephone call was made to Michael Greenfield on January 23, 2003 to request an oral election to the above restriction requirement, but did not result in an election being made.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CAR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CAR 1.48(b) and by the fee required under 37 CAR 1.17(I).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CAR 1.143).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D., whose telephone number is (703) 306-5818. The examiner can normally be reached on 7:00 AM-4:30 PM from Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (703) 308-1152. The fax phone number for this Group is (703) 305-7401.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group analyst Chantae Dessau whose telephone number is (703) 605-1237.

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Arun Chakrabarti,

Patent Examiner,

AU 1634,

January 23, 2003



**W. Gary Jones**  
**Supervisory Patent Examiner**  
**Technology Center 1600**

Claims

1. A nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components wherein, in response to an interaction of a single stranded RNA (ssRNA) having a single nucleotide polymorphism (SNP) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction resulting in a detectable response.
2. A nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components wherein, in response to an interaction of a single stranded DNA (ssDNA) having a single nucleotide polymorphism (SNP) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction resulting in a detectable response.
3. A nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components wherein, in response to an interaction of a single stranded RNA (ssRNA) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction resulting in cleavage of a predetermined nucleic acid molecule associated with a disease.
4. A nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components wherein, in response to an interaction of a single stranded DNA (ssDNA) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction resulting in cleavage of a predetermined nucleic acid molecule associated with a disease.
5. A nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components wherein, in response to an interaction of a single stranded RNA (ssRNA) having a single nucleotide polymorphism (SNP) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction resulting in ligation of a predetermined nucleic acid molecule to another predetermined nucleic acid molecule.

6. A nucleic acid sensor molecule comprising an enzymatic nucleic acid component and one or more sensor components wherein, in response to an interaction of a single stranded DNA (ssDNA) having a single nucleotide polymorphism (SNP) with the nucleic acid sensor molecule in a system, the enzymatic nucleic acid component catalyzes a chemical reaction resulting in ligation of a predetermined RNA molecule to another predetermined RNA molecule.
7. A method comprising:
- contacting the nucleic acid sensor molecule of claim 1 with a system comprising at least one ssRNA having a single nucleotide polymorphism (SNP) under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to catalyze a chemical reaction resulting in a detectable response; and
  - assaying for said chemical reaction.
8. A method comprising:
- contacting the nucleic acid sensor molecule of claim 2 with a system comprising at least one ssDNA having a single nucleotide polymorphism (SNP) under conditions suitable for the enzymatic nucleic acid component of the nucleic acid sensor molecule to catalyze a chemical reaction resulting in a detectable response; and
  - assaying for said chemical reaction resulting in a detectable response.
9. The nucleic acid sensor molecule of claim 1 or claim 2, wherein said chemical reaction is cleavage of a phosphodiester internucleotide linkage.
10. The nucleic acid sensor molecule of claim 1 or claim 2, wherein said chemical reaction is ligation of a predetermined nucleic acid molecule to the nucleic acid sensor molecule.
11. The nucleic acid sensor molecule of claim 1 or claim 2, wherein said chemical reaction is ligation of a predetermined nucleic acid molecule to another predetermined nucleic acid molecule.